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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/775,059 | 02/01/2001 | Fan Piao | 39153/306 (F0793) | 8057 |

7590 04/01/2004

Joseph N. Ziebert
FOLEY & LARDNER
Firstar Center
777 East Wisconsin Avenue
Milwaukee, WI 53202-5367

EXAMINER

CHACKO DAVIS, DABORAH

| ART UNIT | PAPER NUMBER |
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1756

DATE MAILED: 04/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 09/775,059 | PIAO, FAN | |
| | Examiner | Art Unit | |
| | Daborah Chacko-Davis | 1756 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 December 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 7-14 and 21-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 7-14, 21-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 7-14, and 21-31, are rejected under 35 U.S.C. 103(a) as being unpatentable over U. S. Patent No. 6,097,361 (Rohner) in view of WO 98/06560 (Narang et al).

Rohner, in col 1, lines 8-12, in col 3, lines 43-63, and in col 4, lines 1-67, and in col 5, lines 1-7, in col 6, lines 60-63, in col 7, lines 18-34, and in col 12, lines 45-47, discloses a method of manufacturing an integrated circuit comprising providing a pattern of radiation via an LCD assembly and a (reduction lens system (reference 26) (means for focusing the light on the wafer) and performing a semiconductor fabrication process with a pattern of radiation, and providing a second pattern of radiation via the LCD panel to perform a second semiconductor fabrication with the second pattern of radiation, and discloses that the LCD assembly is coupled to a computer system via display driver, control unit, and memory unit. Rohner, in col 7, lines 18-34, discloses that the LCD panel receives the display signals and displays the desired pattern in response to the display signals, wherein the control unit is adapted for coupling the external computer system in order to receive the display data from the computer system

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and is configured to store the display data within the memory unit. Rohner, in col 7, lines 17-34, discloses that the memory unit stores data necessary to display a desired pattern upon the LCD panel (means for providing a pattern of light), wherein the control unit is adapted to a computer system in order to display data from the computer system (means for controlling the means for providing, and selecting the pattern) and configured to store the data (database) within the memory unit in order to forward the display data (from a workstation executing a software program) via the display driver that produces multiple display signals to the LCD panel (claims 7-8, 14, 21, 23, and 25-28). Rohner, in col 4, lines 9-40, in col 6, lines 25-41, discloses that a step-and repeat process is performed to produce the pattern on the light sensitive layer on the substrate (claim 9).

Rohner, in col 1, lines 1-20, discloses that the integrated circuits are produced by patterning layers in succession to form features (metal lines) (interconnects) that comprise elements of an integrated circuit (application specific IC) (claims 10, 13, 22, and 24). Rohner, in col 10, lines 38-67, and in col 11, lines 1-10, discloses that the pattern structure is that of a MOS transistor (claim 11). Rohner, in col 3, lines 61-67, and in col 4, lines 1-8, and lines 21-25, discloses that the pattern is stored electronically (memory unit configures the LCD display data) (claim 12).

Rohner, in col 10, lines 38-62, and in figure 6a, discloses that the image data includes application specific IC information, such as two-dimensional matrix transparent pixel electrodes, and corresponding electrical switching elements as in MOS transistors (claims 29, and 31). Rohner, in col 7, lines 22-23, and lines 49-65, discloses that the image data is stored in the memory unit, and that the

memory unit comprises DRAM devices, and alternatively programmable read-only memory devices (storage media) (claim 30).

The difference between the claims and Rohner is that Rohner does not disclose that a) the control signal is generated by the software to select a plurality of components, wherein each component is associated with individual image data, the individual image data being stored in a database; and b) the computer generates the control signal from the individual image data associated with the corresponding components.

Narang, on page 5, lines 20-30, and on page 6, lines 1-13, discloses that the photoexposure process includes a CAD/CAM system that comprises a means for producing a pattern of radiation (control signal) (a 3-D computer model representation of the object), a means for slicing the representation of the object (plurality of components) into successive layers, means for producing cross section data of the layers of the object (individual image data), and means for providing the cross section data to the computer controlled selective photoexposure means (LCD projector).

Therefore, it would be obvious to a skilled artisan to modify Rohner by employing the method of producing a control signal that corresponds to the individual image data (slice data, cross section data) as taught by Narang because Narang, on page 5, lines 15-30, discloses that employing such a method enables the automated layer-by-layer fabrication of a three-dimensional object from a computer model of the object.

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3. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over U. S. Patent No. 6,097,361 (Rohner) in view of WO 98/06560 (Narang et al) as applied to claims 7-14, and 21-31, above, and further in view of EP 0315589 (Ciba-Geigy).

Rohner is discussed in paragraph no. 2.

The difference between the claim and Rohner is that Rohner does not disclose that the control signal is a video signal.

Ciba-Geigy, in col 4, lines 47-65, discloses that image signal (control signal) is retrieved from a video output.

Therefore, it would be obvious to a skilled artisan to modify Rohner in view of Narang by using the video output devices as the control signal as taught by Ciba-Geigy because Rohner does not limit the display signal to a particular type, and Ciba-Geigy, in col 5, lines 64-65, and in col 6, lines 1-8, discloses that using a video signal enables the operator to view a real-time image of the altered slide image.

Response to Arguments

4. Applicant's arguments with respect to claims 7-14, 21-32, have been considered but are moot in view of the new ground(s) of rejection.

A) Applicant argues that Rohner does not teach generating a control signal from individual images associated with chosen components to configure a mask.

Applicant's argument (directed to the currently filed amendment) is addressed in the new grounds of rejection. See paragraph no. 2.

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

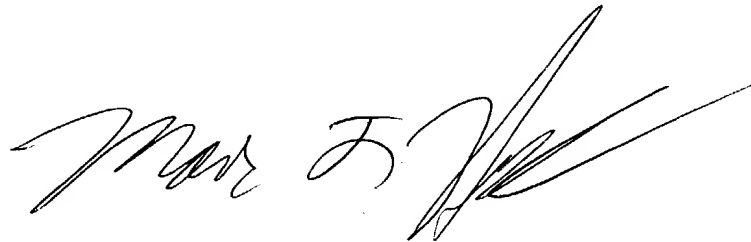
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daborah Chacko-Davis whose telephone number is (571) 272-1380. The examiner can normally be reached on M-F 9:30 - 6:00. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark F Huff can be reached on (571) 272-1385. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from

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either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

dcd


March 24, 2004.



MARK F. HUFF
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700